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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/412,822	10/05/1999	JEFFREY C. REYNAR	13237-2475	1159

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MERCHANT & GOULD
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER
BASHORE, WILLIAM L

ART UNIT	PAPER NUMBER
2176	5

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/412,822		Applicant(s) REYNAR ET AL.
	Examiner William L. Bashore	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 February 2003</u> .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-27</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-27</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

U.S. Patent and Trademark Office

PTO-326 (Rev. 04-01)   Office Action Summary   Part of Paper No. 5

DETAILED ACTION

1. This action is responsive to communications: original application filed 10/5/1999, IDS filed 2/20/2003 as paper 4.

2. Claims 1-27 are pending. Claims 1, 21 are independent.

Claim Rejections - 35 USC § 103

3. **The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Microsoft Word 97 (hereinafter Word 97), 1996 Microsoft Corporation, screenshots pp. 1-11, in view of Karaali et al. (hereinafter Karaali), U.S. Patent No. 6,182,028 issued January 2001.**

In regard to independent claim 1, Word 97 teaches an electronic text editor capable of correcting text (Word 97 pages 1-4; compare with claim 1 *"A computer-implemented method for correcting text, comprising the steps of:"*).

Word 97 teaches receiving an editable text selection of a plurality of words (text components) (Word 97 page 2). The first input source originates from opened file "Helloo World.doc" (Word 97 page 10). The second input source results from user input regarding editing of content (i.e. an input buffer – present for editing a document via keyboard) (compare with claim 1 *"receiving a text selection comprising a plurality of text components derived from different input sources"*).

Word 97 teaches a sentence "This item are free" corrected to read "This item is free", the pop-up

window showing various suggestions, the first suggestion adopted for said correction (Word 97 pages 7-9).

Word 97 does not specifically teach said adopted suggestion as a derived stochastic input source. However,

Karaali teaches part-of-speech disambiguation of words based on hybrid neural-network and stochastic

processing (Karaali Abstract, also column 2 lines 58-67 to column 3 lines 1-5; compare with claim 1 *"at least*

one of the text components comprising a stochastic text component derived from a stochastic input source or a

series of stochastic input sources"). It would have been obvious to one of ordinary skill in the art at the time of

the invention to apply Karaali's method to Word 97's pop-up suggestions (Word 97 page 8), providing Word 97

the benefit of stochastic analysis for more accurate suggestions.

Word 97 teaches right clicking a problem word/phrase, resulting in a pop-up menu of suggestions

(alternative words/phrases) (Word 97 pages 3, 8; compare with claim 1 *"receiving a command to display*

alternatives for the text selection").

Word 97 does not specifically disclose parsing text into text components, as claimed. However, Word

97 teaches alternative suggestions comprising itemized words taken from an original sentence (Word 97 page 8),

hence providing the claimed equivalent of parsing text into itemized components, providing the benefit of

parsing for analyzation purposes (compare with claim 1 *"parsing the text selection into the text components"*).

Word 97 teaches multiple text components (Word 97 page 8). Word 97 does not specifically teach usage

of a stochastic model and combining said model with said present text components. However, Karaali teaches

evaluating words and tags using a stochastic part-of-speech disambiguator model (Karaali Abstract, also

column 2 lines 32-36, Figure 5, column 3 lines 5-15; compare with claim 1 *"retrieving the stochastic model for*

the stochastic text component....or series of input sources.", and *"combining the stochastic model....for the text*

selection"). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply

Karaali's method to Word 97's pop-up suggestions (Word 97 page 8), providing Word 97 the benefit of

stochastic analysis for more accurate suggestions.

Word 97 teaches displaying a list of alternatives (Word 97 pages 3, 8; compare with claim 1 *"displaying the list of alternatives for the text selection on a display device."*).

In regard to dependent claims 2, 3, Word 97 teaches editing a phrase, and selecting from a list of alternative selections (Word 97 page 2-4, 7-9).

In regard to dependent claim 4, claim 4 incorporates substantially similar subject matter as claimed in claim 1, and in further view of the following, is rejected along the same rationale.

Word 97 teaches editing a phrase in a word processor environment (Word 97 page 2,7).

In regard to dependent claim 5, Word 97 teaches a document editor (Word 97 pages 1-2).

In regard to dependent claims 6, 7, claims 6, 7 incorporate substantially similar subject matter as claimed in claim 1, and in further view of the following, is rejected along the same rationale.

Word 97 does not specifically disclose ranking alternatives, as claimed. However, Word 97 teaches display of a number of alternative suggestions, with its best suggestion listed at the top of the list (Word 97 pages 3, 8), providing the claimed equivalent of ranking alternatives in probable order, providing Word 97 the benefit of providing its best suggestions in the most convenient list positions.

In regard to dependent claim 8, claim 8 incorporates substantially similar subject matter as claimed in claim 1, and in further view of the following, is rejected along the same rationale.

Word 97 does not specifically teach a natural language model, or of revised interim lists. However, Karaali teaches application of both rules for disambiguation of text based upon local context, and of a stochastic model (Karaali column 3 lines 5-15). It would have been obvious to one of ordinary skill in the art at the time of

the invention to apply Karaali's method to Word 97's pop-up suggestions (Word 97 page 8), providing Word 97

the benefit of stochastic/natural language analysis for more accurate suggestions.

In regard to dependent claims 9-11, claims 9-11 incorporate substantially similar subject matter as

claimed in claims 1, 8, and are rejected along the same rationale.

In regard to dependent claim 12, Word 97 does not specifically teach a latrtice/metalattice. However,

Karaali teaches a disambiguator utilizing a lattice of tag sets (Karaali column 5 lines 5-10). It would have been

obvious to one of ordinary skill in the art at the time of the invention to apply Karaali to Word 97, providing

Word 97 the benefit of lattices for more accurate analysis.

In regard to dependent claim 13, Word 97 does not specifically teach a latrtice/metalattice, as well as

n-best candidates. However, Karaali teaches a disambiguator utilizing a lattice of tag sets (Karaali column 5

lines 5-10), as well as n-element Boolean vectors (Karaali column 7 lines 21-25). It would have been obvious to

one of ordinary skill in the art at the time of the invention to apply Karaali to Word 97, providing Word 97 the

benefit of lattices and Boolean vectors for more accurate analysis.

In regard to dependent claim 14, Word 97 does not specifically teach a series. However,

Karaali teaches a disambiguator utilizing two disambiguating operations of the inputted data (Karaali column 3

lines 40-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply

Karaali to Word 97, providing Word 97 the benefit of a series of analysis for more accurate analysis.

In regard to dependent claim 15, claim 15 incorporates substantially similar subject matter as claimed

in claim 1, and in further view of the following, is rejected along the same rationale.

Word 97 does not specifically teach n-best candidates, and a series. However, Karaali teaches n-element Boolean vectors (Karaali column 7 lines 21-25), as well as a disambiguator utilizing two disambiguating operations of the inputted data (Karaali column 3 lines 40-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Karaali to Word 97, providing Word 97 the benefit of candidates and a series of analysis for more accurate analysis.

In regard to dependent claim 16, claim 15 incorporates substantially similar subject matter as claimed in claims 1 and 15, and is rejected along the same rationale.

In regard to dependent claims 18, 20, reference Word 97 pages 1-11 comprise screenshots from an active session of Microsoft Word 97 running on a computer.

In regard to dependent claims 17, 19, a computer readable medium for storing instructions (i.e. diskette, hard drive, etc.), is well known in the computer art, therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize said medium for storing said instructions, providing the benefit of storage for later use.

In regard to independent claim 21, Word 97 teaches an electronic text editor capable of correcting text (Word 97 pages 1-4; compare with claim 21 *"A computer-implemented method for correcting text, comprising the steps of:"*).

Word 97 teaches receiving an editable text selection of a plurality of words (text components) (Word 97 page 2; compare with claim 21 *"receiving a text selection comprising a plurality of text components derived from different input sources"*).

Word 97 teaches right clicking a problem word/phrase, resulting in a pop-up menu of suggestions (alternative words/phrases) (Word 97 pages 3, 8; compare with claim 21 *"receiving a command to display alternatives for the text selection"*).

Word 97 teaches an inputted sentence "This item are free" corrected to read "This item is free", the pop-up window showing various suggestions comprising adjacent words, the first suggestion adopted for said correction (Word 97 pages 7-9). Word 97 does not specifically teach usage of a correction scope model. However, Karaali teaches part-of-speech disambiguation of words based on hybrid neural-network and stochastic processing, said models used for determining the scope of change required for text correction (Karaali Abstract, also column 2 lines 58-67 to column 3 lines 1-5; compare with claim 21 *"submitting the text selection to a correction scope model to determine if a scope of correction should be adjusted"*, and *"receiving from the correction scope model a text unit....one adjacent word"*). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Karaali's method to Word 97's pop-up suggestion phrases (Word 97 page 8), providing Word 97 the benefit of scope analysis for more accurate suggestions.

Word 97 teaches right clicking a problem word/phrase, resulting in a pop-up menu of suggestions (alternative words/phrases) (Word 97 pages 3, 8; compare with claim 21 *"producing a list of alternatives for the text unit"*).

Word 97 teaches displaying a list of alternatives (Word 97 pages 3, 8; compare with claim 21 *"displaying the list of alternatives for the text unit on a display device."*).

In regard to dependent claim 22, Word 97 teaches editing a phrase, and selecting from a list of alternative selections (Word 97 page 2-4, 7-9).

In regard to dependent claim 23, Word 97 teaches an inputted phrase "This item are free" (Word 97 page 8). In this example, the word "This" is incorrectly spelled because of a related grammar error regarding the

adjacent word "item" ("item" should be plural due to the word "are"). If the user picks the second suggestion

"These items are...", then words "This", and "item" are corrected.

In regard to dependent claim 24, Word 97 teaches a model of likely (grammar related) errors (Word

97 page 11).

In regard to dependent claim 25, Word 97 does not specifically disclose parsing text into text

components, as claimed. However, Word 97 teaches alternative suggestions comprising itemized words taken

from an original sentence (Word 97 page 8), hence providing the claimed equivalent of parsing text into

itemized components, providing the benefit of parsing for analyzation purposes.

Word 97 teaches multiple text components (Word 97 page 8). Word 97 does not specifically teach usage

of a stochastic model and combining said model with said present text components. However, Karaali teaches

evaluating words and tags using a stochastic part-of-speech disambiguator model (Karaali Abstract, also

column 2 lines 32-36, Figure 5, column 3 lines 5-15). It would have been obvious to one of ordinary skill in the

art at the time of the invention to apply Karaali's method to Word 97's pop-up suggestions (Word 97 page 8),

providing Word 97 the benefit of stochastic analysis for more accurate suggestions.

Word 97 teaches displaying a list of alternatives (Word 97 pages 3, 8).

In regard to dependent claim 26, a computer readable medium for storing instructions (i.e. diskette,

hard drive, etc.), is well known in the computer art, therefore it would have been obvious to one of ordinary skill

in the art at the time of the invention to utilize said medium for storing said instructions, providing the benefit of

storage for later use.

In regard to dependent claim 27, reference Word 97 pages 1-11 comprise screenshots from an active

session of Microsoft Word 97 running on a computer.

Conclusion

5. **Prior art made of record and not relied upon is considered pertinent to disclosure.**

Franz et al.   U.S. Patent No. 6,161,083   issued   12-2000
Schabes et al.   U.S. Patent No. 6,424,983   issued   07-2002

Damerau, Fred J., A technique for computer detection and correction of spelling errors, ACM March 1964, Volume 7, Issue 3, pp. 171-176.

6.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to William Bashore whose telephone number is **(703) 308-5807**. The examiner can

normally be reached on Monday through Friday from 11:30 AM to 8:00 PM EST.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Joseph Feild, can be reached on **(703) 305-9792**.

        Any inquiry of a general nature or relating to the status of this application should be directed to the

Group receptionist whose telephone number is **(703) 305-3900**.

7.   **Any response to this action should be mailed to:**

            Commissioner of Patents and Trademarks
            Washington, D.C. 20231

        or faxed to:

            (703) 746-7239 (for formal communications intended for entry)
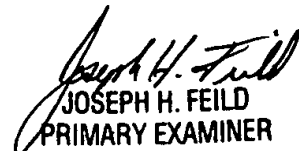   **or:**
            (703) 746-7240 (for informal or draft communications, please label "PROPOSED" or "DRAFT")
        or:
            (703) 746-7238 (for after-final communications)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (Receptionist).

William L. Bashore
July 26, 2003

JOSEPH H. FEILD
PRIMARY EXAMINER